

Auditory Processing Disorder (APD)

Auditory processing disorder (APD), also known as central auditory processing disorder (CAPD), is a hearing problem that affects about 5% of school-aged children.

Kids with this condition can't process what they hear in the same way other kids do because their ears and brain don't fully coordinate. Something interferes with the way the brain recognizes and interprets sounds, especially speech.

With the right therapy, kids with APD can be successful in school and life. Early diagnosis is important, because when the condition isn't caught and treated early, a child can have speech and language delays or problems learning in school.

Trouble Understanding Speech

Kids with APD are thought to hear normally because they can usually hear sounds that are delivered one at a time in a very quiet environment (such as a sound-treated room). The problem is that they usually don't recognize slight differences between sounds in words, even when the sounds are loud and clear enough to be heard.

These kinds of problems usually happen when there is background noise, which is often the case in social situations. So kids with APD can have trouble understanding what is being said to them when they're in noisy places like a playground, sports events, the school cafeteria, and parties.

Symptoms

Symptoms of APD can range from mild to severe and can take many different forms. If you think your child might have a problem processing sounds, ask yourself these questions:

- Is your child easily distracted or unusually bothered by loud or sudden noises?
- Are noisy environments upsetting to your child?
- Does your child's behavior and performance improve in quieter settings?
- Does your child have difficulty following directions, whether simple or complicated?
- Does your child have reading, spelling, writing, or other speech-language difficulties?
- Are verbal (word) math problems difficult for your child?
- Is your child disorganized and forgetful?
- Are conversations hard for your child to follow?

APD is often misunderstood because many of the behaviors noted above also can accompany other problems, like learning disabilities, [attention deficit hyperactivity disorder \(ADHD\)](#), and even [depression](#).

Causes

Often, the cause of a child's APD isn't known. Evidence suggests that [head trauma](#), [lead poisoning](#), and chronic [ear infections](#) could play a role. Sometimes, there can be multiple causes.

Diagnosis

If you think your child is having trouble hearing or understanding when people talk, have an audiologist (hearing specialist) exam your child. Only audiologists can diagnose auditory processing disorder.

Audiologists look for five main problem areas in kids with APD:

Auditory figure-ground problems: This is when a child can't pay attention if there's noise in the background. Noisy, loosely structured classrooms could be very frustrating.

Auditory memory problems: This is when a child has difficulty remembering information such as directions, lists, or study materials. It can be immediate ("I can't remember it now") and/or delayed ("I can't remember it when I need it for later").

Auditory discrimination problems: This is when a child has difficulty hearing the difference between words or sounds that are similar (COAT/BOAT or CH/SH). This can affect following directions and reading, spelling, and writing skills, among others.

Auditory attention problems: This is when a child can't stay focused on listening long enough to complete a task or requirement (such as listening to a lecture in school). Kids with CAPD often have trouble maintaining attention, although health, motivation, and attitude also can play a role.

Auditory cohesion problems: This is when higher-level listening tasks are difficult. Auditory cohesion skills — drawing inferences from conversations, understanding riddles, or comprehending verbal math problems — require heightened auditory processing and language levels. They develop best when all the other skills (levels 1 through 4 above) are intact.

Since most of the tests done to check for APD require a child to be at least 7 or 8 years old, many kids aren't diagnosed until then or later.

Helping Your Child

A child's auditory system isn't fully developed until age 15. So, many kids diagnosed with APD can develop better skills over time as their auditory system matures. While there is no known cure, [speech-language therapy](#) and assistive listening devices can help kids make sense of sounds and develop good communication skills.

A frequency modulation (FM) system is a type of assistive listening device that reduces background noise and makes a speaker's voice louder so a child can understand it. The speaker wears a tiny microphone and a transmitter, which sends an electrical signal to a wireless receiver that the child wears either on the ear or elsewhere on the body. It's portable and can be helpful in classroom settings.

A crucial part of making the FM system effective is ongoing therapy with a speech-language pathologist, who will help the child develop speaking and hearing skills. The speech-language pathologist or audiologist also may recommend tutoring programs.

Several computer-assisted programs are geared toward children with APD. They mainly help the brain do a better job of processing sounds in a noisy environment. Some schools offer these programs, so if your child has APD, be sure to ask school officials about what may be available.

At Home

Strategies applied at home and school can ease some of the problem behaviors associated with APD.

Kids with APD often have trouble following directions, so these suggestions may help:

- Reduce background noise whenever possible at home and at school.
- Have your child look at you when you're speaking.
- Use simple, expressive sentences.
- Speak at a slightly slower rate and at a mildly increased volume.

- Ask your child to repeat the directions back to you and to keep repeating them aloud (to you or to himself or herself) until the directions are completed.
- For directions that are to be completed later, writing notes, wearing a watch, or maintaining a household routine can help. So can general [organization](#) and scheduling.
- It can be frustrating for kids with APD when they're in a noisy setting and they need to listen. Teach your child to notice noisy environments and move to quieter places when listening is necessary.

Other tips that might help:

- Provide your child with a quiet study place (not the kitchen table).
- Maintain a peaceful, organized lifestyle.
- Encourage good eating and sleeping habits.
- Assign regular and realistic chores, including keeping a neat room and desk.
- Build your child's [self-esteem](#).

At School

It's important for the people caring for your child to know about APD. Be sure to tell [teachers](#) and other school officials about the APD and how it may affect learning. Kids with APD aren't typically put in special education programs, but you may find that your child is eligible for a [504 plan](#) through the school district that would outline any special needs for the classroom.

Some things that may help:

- changing seating plans so your child can sit in the front of the classroom or with his or her back to the window
- study aids, like a tape recorder or notes that can be viewed online
- computer-assisted programs designed for kids with APD

Keep in regular contact with school officials about your child's progress. One of the most important things that both parents and teachers can do is to acknowledge that APD is real. Its symptoms and behaviors are not something that a child can control. What the child can control is recognizing the problems associated with APD and using the strategies recommended both at home and school.

A positive, realistic attitude and healthy self-esteem in a child with APD can work wonders. And kids with APD can go on to be just as successful as other classmates. Coping strategies and techniques learned in speech therapy can help them go far.

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Reference: <http://kidshealth.org/en/parents/central-auditory.html>